

CLAIMS

1. An improved structure automobile engine crankcase oil drain tap plug comprised of a tap plug member, a guide sleeve, and a sealing ring, wherein:

the said tap plug member outer diameter includes a drive section that
5 provides for turning by a manual wrench (or socket), the top and bottom ends of
said drive section are radially reduced to respectively form an upper threaded
tubular section that fastens into an automobile crankcase drain hole and a lower
threaded tubular section suspended below, a guide passage is formed lengthwise
through the said upper threaded tubular section and the said lower threaded tubular
10 section and, furthermore, a one-way non-return approach valve member is movably
disposed on the said guide passage that shuts the said lower extent of the said
passage; an annular magnet is positioned inside the top end of the said upper
threaded tubular section and a plurality of through-holes are bored into the
underlying edge of its bottom end and, as such, the metal particles suspended in the
15 crankcase oil are automatically collected and full oil convergence is provided for in
the said upper threaded tubular section;

the said guide sleeve is a threaded tube of a predetermined length fastened
onto the outer diameter of the said tap plug member lower threaded tubular section
such that it travels a predetermined distance lengthwise during an oil drainage

operation; a holding rod is trussed through the internal section and, furthermore, along the center of the said guide passage, enabling the gradual opening of the said guide passage as the said guide sleeve shifts lengthwise and synchronously upward against the underside of the said valve member, its bottom end movably disposed
5 on an oil conduit of a certain length to draw off the oil discharged through the said guide passage;

the said sealing ring is a cap having a one-way opening, with internal threads tapped from the ends along the inner diameter and an anti-leak washer such it can be fastened to the bottom extent of the suspended said tap plug member
10 lower threaded tubular section, the automobile engine crankcase thereby not requiring double leakage protection during oil drainage.

2. As mentioned in Claim 1 of the improved structure automobile engine crankcase oil drain tap plug of the invention herein, the said valve member on the said guide passage optimally consists of a steel ball with a spring movably
15 disposed over it which thereby ensures that the said steel ball is brought downward to seal the said guide passage.

3. As mentioned in Claim 1 of the improved structure automobile engine crankcase oil drain tap plug of the invention herein, the said holding rod trussed

lengthwise through the internal section of the said guide passage has a bearing section at its top extremity which stably supports the underside of the said valve member.